

## External sources of information

The following websites have further information:

### Macular Disease Society

Tel: 0845 241 2041

[www.macular-disease.org](http://www.macular-disease.org)

### Royal National Institute of Blind People

Helpline: 0303 123 9999

[www.rnib.org.uk](http://www.rnib.org.uk)

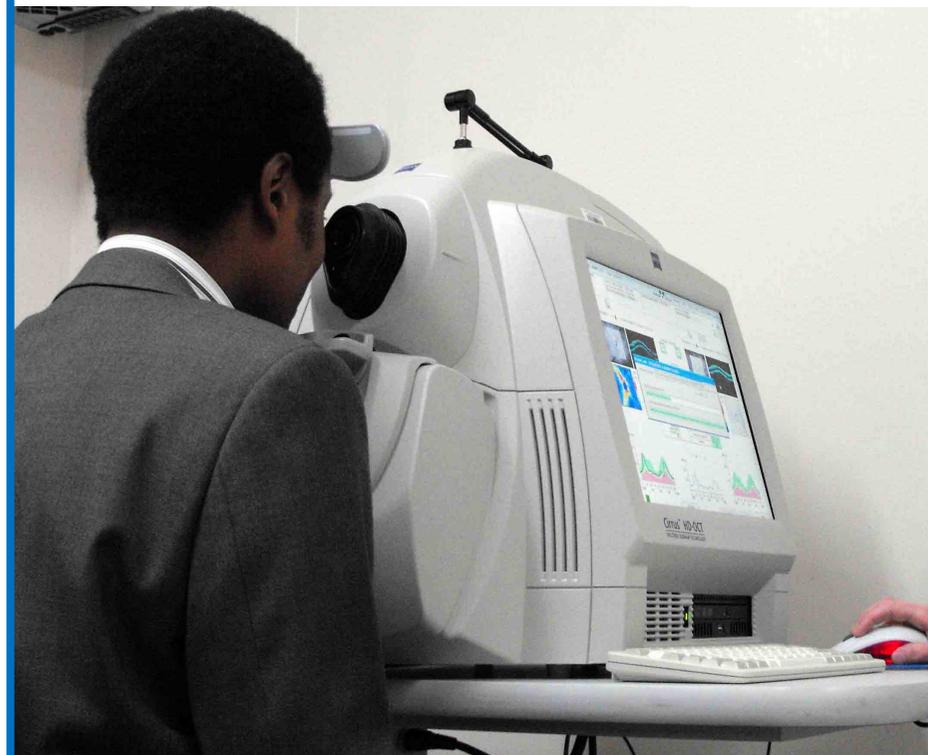
## References

If you require a full list of references for this leaflet please email [patient.information@ulh.nhs.uk](mailto:patient.information@ulh.nhs.uk)

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# Macular Hole

Ophthalmology Department  
Lincoln County Hospital

[www.ulh.nhs.uk](http://www.ulh.nhs.uk)

## Aim of the leaflet

The aim of this leaflet is to provide further information on macular holes and treatment and advice for the condition.

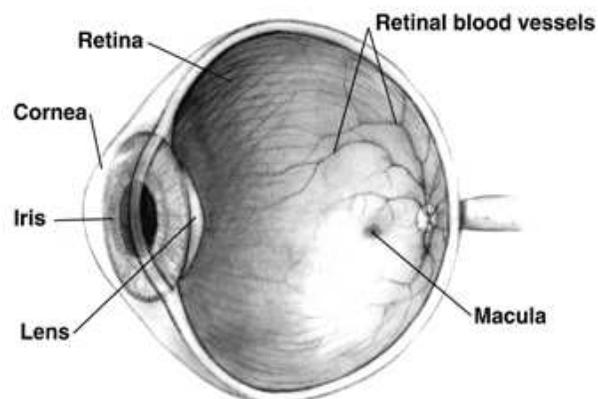
## Other names

Macular cyst, retinal hole, retinal tear and retinal perforation.

## What is a macular hole?

A macular hole is a small break in the macula, located in the centre of the eye's light-sensitive tissue called the retina. The macula provides the sharp, central vision we need for reading, driving and seeing fine detail.

A macular hole can cause blurred and distorted central vision. Macular holes are related to ageing and usually occur in people aged over 60.



## Is my other eye at risk?

If a macular hole exists in one eye, there is a 10 to 15% chance that a macular hole will develop in your other eye over your lifetime. Your doctor can discuss this with you.

**For further information please speak to your doctor**

## Contact details

If you have any questions about any of the information contained in this leaflet please contact:

### **Clinic 8, Lincoln County Hospital**

01522 307180

Monday to Friday 9am to 5pm

### **Royle Eye Department, Pilgrim Hospital**

01205 445626

Monday to Thursday 8am to 8pm, Friday 9am to 5pm

common complications include infection and retinal detachment, either during surgery or afterward, both of which can be immediately treated.

For a few months after surgery, patients are not permitted to travel by air. Changes in air pressure may cause the bubble in the eye to expand, increasing pressure inside the eye.

### **How successful is this surgery?**

Vision improvement varies from patient to patient. People that have had a macular hole for less than six months have a better chance of recovering vision than those who have had one for a longer period. Discuss vision recovery with your doctor before your surgery. Vision recovery can continue for as long as three months after surgery.

### **What if I cannot remain in a face-down position after the surgery?**

If you cannot remain in a face-down position for the required period after surgery, vision recovery may not be successful. People who are unable to remain in a face-down position for this length of time may not be good candidates for a vitrectomy. However, there are a number of devices that can make the "face-down" recovery period easier on you. There are also some approaches that can decrease the amount of "face-down" time. Discuss these with your doctor.

### **Is a macular hole the same as age-related macular degeneration?**

No. Macular holes and age-related macular degeneration are two separate and distinct conditions, although the symptoms for each are similar. Both conditions are common in people 60 and over. An eye care professional will know the difference.

### **What causes a macular hole?**

Most of the eye's interior is filled with vitreous, a gel-like substance that fills about 80% of the eye and helps it maintain a round shape. The vitreous contains millions of fine fibres that are attached to the surface of the retina. As we age, the vitreous slowly shrinks and pulls away from the retinal surface. Natural fluids fill the area where the vitreous has contracted. This is normal. In most cases, there are no adverse effects. Some patients may experience a small increase in floaters, which are little "cobwebs" or specks that seem to float about in your field of vision.

However, if the vitreous is firmly attached to the retina when it pulls away, it can tear the retina and create a macular hole. Also, once the vitreous has pulled away from the surface of the retina, some of the fibres can remain on the retinal surface and can contract. This increases tension on the retina and can lead to a macular hole. In either case, the fluid that has replaced the shrunken vitreous can then seep through the hole onto the macula, blurring and distorting central vision.

Macular holes can also occur from eye disorders, such as high myopia (nearsightedness), macular pucker and retinal detachment; eye disease, such as diabetic retinopathy and Best's disease and injury to the eye.

### **What are the symptoms of a macular hole?**

Macular holes often begin gradually. In the early stage of a macular hole, people may notice a slight distortion or blurriness in their straight-ahead vision. Straight lines or objects can begin to look bent or wavy. Reading and performing other routine tasks with the affected eye become difficult.

### **Are there different types of a macular hole?**

Yes. There are several stages to a macular hole:

- Foveal detachments (Stage I). Without treatment, about half of Stage I macular holes will progress.
- Small full-thickness holes (Stage II) - less than 400 µm in size.
- Larger full-thickness holes (Stage III) - more than 400 µm in size.

The size of the hole and its location on the retina determine how much it will affect a person's vision. When a Stage III macular hole develops, most central and detailed vision can be lost. If left untreated, a macular hole rarely can lead to a detached retina, a sight-threatening condition that should receive immediate medical attention.

### **How is a macular hole treated?**

Although some macular holes can seal themselves and require no treatment, surgery is necessary in many cases to help improve vision. In this surgical procedure (called a vitrectomy) the vitreous gel is removed to prevent it from pulling on the retina and replaced with a bubble containing a mixture of air and gas. The bubble acts as an internal, temporary bandage that holds the edge of the macular hole in place as it heals. Surgery is performed under local anaesthesia and often on an out-patient basis.

Following surgery, patients must remain in a face-down position, normally for a day or two but sometimes for as long as two-to-three weeks. This position allows the bubble to press against the macula and be gradually reabsorbed by the eye, sealing the hole. As the bubble is reabsorbed, the vitreous cavity refills with natural eye fluids.

Maintaining a face-down position is crucial to the success of the surgery. Because this position can be difficult for many people, it is important to discuss this with your doctor before surgery.

### **What are the risks of surgery?**

The most common risk following macular hole surgery is an increase in the rate of cataract development. In most patients, a cataract can progress rapidly and often becomes severe enough to require removal. Other less